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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,964	01/05/2004	Makoto Itoi	Q78965	1863

23373 7590 01/14/2005

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EXAMINER

WRIGHT, ANDREW D

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/750,964

Applicant(s)

ITOI, MAKOTO

Examiner

Andrew Wright

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoshiba (US 6,102,755) in view of Graham et al. (US 6,587,765). Hoshiba shows an electronic controlled drive apparatus for an outboard engine. Hoshiba shows control means (65) and lever (67). The ECU (59) is a target value calculating means for calculating target throttle opening degree based upon an inputted position of the operational lever. Servo motor (73) is a throttle actuator that opens and closes the throttle valve (46) of the engine in accordance with a signal received from the ECU. The signal is the target throttle opening degree, as is known in the art. Hoshiba does not disclose that the ECU calculates a target shift position based upon the inputted position of the lever, and a shift actuator that actuates a shift in accordance with the target shift position. Hoshiba, instead, discloses that the shift is actuated by a mechanical linkage between the lever (67), cable (68), shift rod (69), and shift cam (71). It is well known and common in the art for both the throttle and shift control to be "fly by wire" as the throttle control of Hoshiba is. Graham shows an engine control that comprises an operational lever, an ECU, a throttle actuator, and a shift actuator.

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The ECU determines target throttle position and target shift position based upon the position of the lever. The ECU sends signals of these target positions to the respective actuators. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hoshiba by replacing the mechanical shift control of Hoshiba with the electric shift control disclosed by Graham. The motivation would be to reduce the size and weight of the system by eliminating that cables and shift rod shown by Hoshiba. The result would be that the Hoshiba ECU would calculate a target throttle opening degree and a target shift position based upon an inputted position of the lever; and that a throttle actuator and a shift actuator would receive the respective target signals from the ECU for controlling the throttle and shift positions.

3. Still regarding claim 1, Hoshiba discloses in figure 6, lines 37-43 of column 6, and lines 22-31 of column 7 that the apparatus senses a shift of the lever (67) and immediately increases the engine speed above idle before performing the shift. Control lever position sensor (72) and ECU (59) together constitute a means for determining whether or not the target shift position is in the shift-in state. The algorithm of the ECU that increases the engine speed above idle is the correction throttle opening degree setting means for setting a predetermined throttle opening degree. The claim recites that the throttle is opened when the target shift position is in the shift-in state, not as a result of the determination means determining that the target shift position is in the shift-in state. In the modified invention of Hoshiba, the throttle is opened (i.e. engine speed is increased) at the same time that the target shift position is in a shift-in state.

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Since the two are coincident the modified invention of Hoshiba reads on the claim.

4. Still regarding claim 1, Hoshiba does not disclose that the throttle is opened by a predetermined throttle opening degree. The Hoshiba ECU is a programmed controller and thus deals in discrete values. The only way that the throttle opening degree could not be predetermined is if it is generated randomly by the ECU for each occurrence. It would be obvious to make the throttle opening degree not random for the purpose of providing consistent operating characteristics for the user. It is well known and common to use preset values, formulas, and look up tables, all of which are predetermined values, for providing engine operating parameters such as this. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hoshiba by using a predetermined throttle opening degree.

Allowable Subject Matter

5. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments, filed 11/16/04, with respect to the rejection(s) of claim(s) 1 have been fully considered and are persuasive. Therefore, the

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rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hoshiba in view of Graham.

Conclusion

7. Any inquiry concerning this communication should be directed to examiner Andrew D. Wright at telephone number (703) 308-6841. The examiner can normally be reached Monday-Friday from 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano, can be reached at (703) 308-0230. The fax number for official communications is 703-872-9306. The fax number directly to the examiner for unofficial communications is 703-746-3548.

The examiner and his supervisor are relocating to the new Office campus in Alexandria, VA, on or around April 5, 2005. Telephone calls to the examiner and the examiner's supervisor after that date should be directed as follows. The examiner's new telephone will be (571) 272-6690. The examiner's fax number for unofficial communications will be (571) 273-6690. The supervisor's new telephone number will be (571) 272-6684.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew D. Wright
Patent Examiner
Art Unit 3617

Ar 1/12/05
ANDREW D. WRIGHT
PRIMARY EXAMINER